

### **Abstract of the Disclosure**

There are provided methods of purifying a material, comprising melting solid material to form liquefied material, directionally solidifying a portion of the liquefied material; and removing a liquid remainder from the purified solidified material. Preferably, the purified solidified material is melted to form re-liquefied purified material, and re-liquefied purified material is removed. Preferably, the material is positioned in a container as it is being purified. The method is particularly useful for purifying elemental material, e.g., semiconductor material such as silicon and/or germanium, such as recycle scrap silicon and/or metallurgical grade silicon. There are also provided systems for carrying out such methods.

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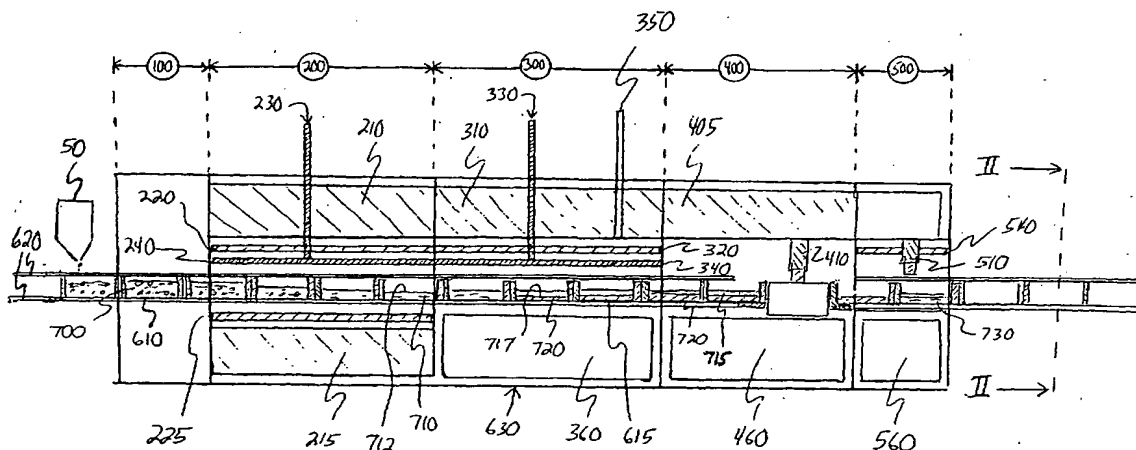
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- (71) Applicant (for all designated States except US): **ASTROPOWER, INC.** [US/US]; 100 Pencader Drive, Newark, DE 19702-3316 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **HALL, Robert, B.** [US/US]; 4809 W. Pier Mountain Place, Marana, AZ 85653 (US). **KENDALL, Scott, L.** [US/US]; 317 Baker Drive, Lincoln University, PA 19352 (US). **RAND, James, A.** [US/US]; 209 Evergreen Court, Landenberg, PA 19350 (US). **SIMS, Paul, E.** [US/US]; 134 Meadowood Drive, Newark, DE 19711 (US).
- (74) Agents: **BROWN, Kevin, C. et al.**; BURR & BROWN, P.O. Box 7068, Syracuse, NY 13261 (US).
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(57) **Abstract:** There are provided methods of purifying a material, comprising melting solid material to form liquefied material, directionally solidifying a portion of the liquefied material; and removing a liquid remainder from the purified solidified material. Preferably, the purified solidified material is melted to form re-liquefied purified material, and re-liquefied purified material is removed. Preferably, the material is positioned in a container as it is being purified. The method is particularly useful for purifying elemental material, e.g., semiconductor material such as silicon and/or germanium, such as recycle scrap silicon and/or metallurgical grade silicon. There are also provided systems for carrying out such methods.

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